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ABSTRACT

Funding of much creative effort to solve educational problems is riding on effective states needs assessment and, therefore, suggests a model for accountability as well as identification of cognitive and affective needs. Concepts for model constructs are several, including the learner's unique self-social system: the school and classroom with its own mix of interacting influences: policy, instruction, content, personnel and their perceptions. Output gaps between criterion behaviors and attainment can then be analyzed for present accountability and used as guidelines for change, planning, and continuing assessment. (Author)

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D43 COMPARATIVE MODELS FOR STATE NEEDS ASSESSMENT
(SYMPOSIUM)

# CONCEPTUAL MODEL FOR ASSESSMENT AND ANALYSIS OF LEARNER-ORIENTED EDUCATIONAL NEEDS OF VIRGINIA 1969 - 1970

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# VIRGINIA EDUCATIONAL NEEDS ASSESSMENT STUDY: RESEARCH STRATEGIES AND MODEL FOR ASSESSMENT AND ANALYSIS

## Inception of the Study

In 1969, and in conjunction with the states assuming full responsibility for the administration of ESEA Title III monies, the Virginia State Department of Education, as part of the total State plan, undertook to assess the educational needs of its public school children. On June 30, 1969, the State Department of Education sub-contracted with the Bureau of Educational Research in the Curry Memorial School of Education at the University of Virginia to conduct this assessment study in close collaboration with the Department.

## Study Objectives

Foremost in the formulation and acceptance of Study objectives was the mandate to concentrate attention on the assessment of learner-oriented needs, including the cognitive and affective domains. With this in mind, the Bureau staff and State Directors agreed on the following objectives:

1. To examine the aspirations of and for elementary and secondary children in Virginia.
2. To examine actual achievements throughout the State in matters relevant to these goals.
3. To determine the relative severity of educational needs.
4. To provide a basis for periodic review of educational needs in the future.
5. To convey to lay and professional communities an awareness of the values of, and procedures for, effective assessment of educational needs.

# INITIAL RESEARCH STRATEGY

With the purposes of the Study established and extensive systematic and automated documentary analysis underway, the staff began to evolve its research strategy for needs assessment.

## Considerations and Decisions

### NEED DEFINITION

Fundamental to any research strategy for needs assessment is to establish a definition of *need*. The staff decided not to define educational need or structure needs assessment on some a priori basis such as polling "experts" as to their perceptions of educational needs or to use only performance data and other statistical information to project needs or even to use recommendations (as needs) found in commissioned reports on the status of education in Virginia. Rather, the staff developed a system of assessment that moved from goals to evidences of programmatic effort, to evidences of programmatic outcome. This system is a posteriori and defines *need* in operational terms as evidence of a gap between an educational goal or objective and evidence of educational outcome.

### EXTERNAL AND INTERNAL APPROACH

Another strategy decision involved using documentary analysis of sources both internal and external to Virginia to formulate learner-oriented objectives and to obtain evidences of goal formulation and objectives such as policy guidelines, programmatic recommendations, and statements found in the professional literature. Thus, the needs status of the educational enterprise in Virginia was provided with adjudication potential by both internal and external standards and recommendations.

## PROGRAMMATIC EFFORT AND PROGRAMMATIC OUTCOME

Further, the staff clearly separated evidence of programmatic effort from evidence of programmatic outcome. Programmatic effort was defined as goals which are "implemented." They are found in specific and explicit directives of instructions such as accreditation standards. Programmatic effort was considered to be an intervening variable between goal formulation and evidence of outcome. Although programmatic effort is no guarantee of programmatic outcome, this scheme makes it possible to link the areas of school activity in the evaluation of outcomes with their appropriate antecedent policies, directives, and objectives.

## AUTHORITATIVE AND NON-AUTHORITATIVE STATEMENTS

The staff also classified documents and statements therein into"authoritative" and "non-authoritative" types, the former being directives or policies made by individuals and official bodies in Virginia having authority and responsibility for the allocation of public resources to schools and/or the management of school programs. Non-authoritative statements were two-fold in source: (1) internal non-authoritative recommendations by those officially designated by"authorities" to serve as reviewers, advisors, evaluators, and consultants in Virginia's educational programs, and (2) external non-authoritative recommendations, including objectives widely recommended by professional literature and also found in federal governmental policy and documented experiences of other state and local educational agencies. This strategy allowed the staff to consider in needs assessment statements on the educational enterprise from the many and diverse publics, professional educators or otherwise.

## SELF-SOCIAL SYSTEM TO SCHOOL ENVIRONMENT

Crucial to needs assessment and especially analysis of identified needs is an approach to accountability. While obvious and important variables need to be considered, such as geographic

regions, school enrollment, population density, the staff realized that the ultimate focus of any needs assessment study is the pupil with his personal characteristics, potentialities and behaviors in his social environment, and the same pupil in his school environment with its mix of interacting influences, including personnel, policies and practices.

Though the self-social system as a theory is not original with the staff, its applicability in needs assessment is partially innovative and a recognition of the significant influences of this input system as the pupil experiences the impact of the interacting influences in his school and classroom.

### MANDATE

Finally, the mandate to assess the learner-oriented educational needs of pupils conditioned the strategy decisions by the staff. Major emphasis was accordingly placed on the needs of the learner in the school and classroom with minor emphasis given to those learner-supportive and learning-facilitative domains that in various ways affect or even determine degrees of educational outcome. Notwithstanding the mandate, the staff scrupulously investigated selected aspects of the learning-facilitative domain which by import and implementation necessarily provide the bases for the potential attainment of educational outcomes.

## CONCEPTS FOR MODEL CONSTRUCTS

Having (1) analyzed and developed its own initial needs assessment concepts, approaches and requirements after (2) reviewing the work done and concepts held by others, the staff evolved its research strategy or Model for the present Study.

In an effort to explain the behavior of the individual as an individual and as a member of a social group, the Model is theoretically eclectic. It utilizes the concepts of economics, sociology, anthropology, social psychology as well as psychology. Such a multidisciplinary approach seemed inherent in the purpose

of the Model which was to provide a rationale for the identification and analysis of learner-oriented educational needs of Virginia's public school children.

Fundamental to the development of the Model was the relationship between the Self System and the Social System as inputs to the Focal System: the Learner in the School and Classroom. The "school and classroom" as a social system provides the setting within which the self system of the learner is expressed in three output areas: learner-oriented behaviors in the cognitive domain, learner-oriented behaviors in the affective domain, and the interrelationships of these cognitive and affective behaviors. These behavioral outputs (assumed to be modified in the Focal System) are considered as indicators of Self Perceptions, Verbally Expressed Behaviors, and Manifest Behaviors which the learner originally possessed on entry to the Focal System.

The following discussion is concerned with identifying and/or defining the variables in the Model. The variables employed in the two inputs to the Focal System are dealt with first. The interacting variables of influence in the Focal System are then discussed. The output variables from the Focal System are identified next. Finally, a schema for initiating needs assessment in ensuing academic time periods is described. The discussion is limited in this presentation but the full rationale for Model concepts is reported in Volume I of The Virginia Educational Needs Assessment Study, 1970.

## CONCEPTUAL MODEL

This Model represents the constructs emanating from the concepts the staff used and modified for the assessment and analysis of the educational needs of Virginia's public school children.

The first page presents the overall schema. Each succeeding page identifies the nature of a Model construct. The last page of the Model gives the key to the various modes by which assessment

of input, output and other variables was made possible. Because of constraint of time or other restrictions, variables left unmeasured in the first phase of the Study are indicated in the Model.

## EXPLANATION OF THE MODEL

The first Model page shows the schema of relationships among the Model constructs.

The second Model page indicates self-system inputs to the Focal System and includes individual characteristics and behaviors. Self perceptions are classified as feelings of worth and competence. Behaviors which can be associated with self perceptions were explored in the Focal System. Verbally Expressed Behaviors are conceived as both written and oral communication or behavior and to include two categories: cognitive and affective. Manifest Behaviors are behaviors demonstrating (1) positive attitudes and interests as well as competencies in citizenship (2) feelings of worth as well as competency in the school and classroom and (3) in interpersonal relationships. Also in the classroom, there are two other dimensions: level of involvement (low vs high) and type of involvement (conforming vs non-conforming).

The third Model page reveals the Social System inputs to the Focal System. Of particular import as inputs to the Focal System are perceptions, values, goals and policies of national, Virginia and local community enterprises.

The fourth Model page displays the Focal System: the Learner in the School and Classroom. The major construct in the Model is this Focal System with its mix of interacting influences:

Teacher characteristics and perceptions
Principal characteristics and perceptions
Content and content perceptions
Extra-curricular selection and decision
Peer group influences
Learning-facilitative resources and perceptions

Each of these variables and their interaction affects the learning process--in fact the teacher-learning process--and thus the Outputs of the Focal System, meaning outcomes in terms of pupil achievement, status and needs in the cognitive and affective domains.

Conceptually and pragmatically it is essential to consider the aforementioned variables if any accounting is to be made of learner-oriented needs as outcomes of the educational enterprise, be it local, divisional, regional or state-wide. To expedite this accountability, the staff developed or used instrumentation to obtain teachers' and principals' characteristics and their perceptions of the educational enterprise in the Focal System and also of selected facilitative and community variables.

The fifth Model page shows measured outputs of the Focal System. Conceptualization of the Model includes the premise that the cognitive domain operates in concert with the affective domain. The child's direct and indirect social experiences help him to form his self perceptions which influence his receptivity to incoming communications. These communications are both cognitive and affective and they are mutually dependent.

It is suggested that cognitive learning efficiency is related to, or even dependent upon, the learner's efficiency in acquiring the dominant attitudes, values, and belief systems of the learning environment. Children who have previously learned the skills of the dominant affective domain face only the single task of learning the skills of the cognitive domain. On the other hand, children who have not, are faced with three tasks. They must, at one and the same time (1) unlearn the skills of their familiar affective domain, (2) learn the skills of the new affective domain, and finally, (3) learn the skills of the cognitive domain. This line of reasoning seems to support the conclusion that: the greater the discrepancy between the affective domain of the self system and the learning environment, the more difficult the tasks of the learning process.

In keeping with the conceptualization of the Model, Measured

Outputs of the Focal System include, as previously mentioned, assessment and analysis of achievements and needs in the cognitive domain and affective domain:

A. Cognitive
   - English Education
   - Reading
   - Social Studies
   - Science
   - Mathematics
   - Work-Study and Library Skills

B. Affective
   - Self Esteem
   - Citizenship
   - Social interrelationships
   - Self in school and classroom

Specifically, once these needs are identified in terms of evidence of a gap between an educational gcal and an educational outcome, the Model conceptually and as operationally applied accommodates analysis by affective, cognitive, demographic, perceptual, and learning-facilitative variables.

The sixth Model page depicts the Future Assessment and Analysis of Learner-Oriented Educational Needs. Inherent in the Model is the provision for initiating needs assessment in ensuing academic time periods. Measured outputs are studied as self system inputs to ensuing assessment, and the social system is re-examined in terms of the then prevalent interacting national, state, and local variables as inputs to the same ensuing academic period. The Model as presented in the Study was conceived without opportunity to test its applicability at the divisional and/or local levels. A logical next step would involve refining the Model and making it operational for needs assessment for various purposes and at all organizational levels of the educational enterprise in Virginia.

The last Model page indicates the numerical reference key to modes of assessment.

# CONCLUSION

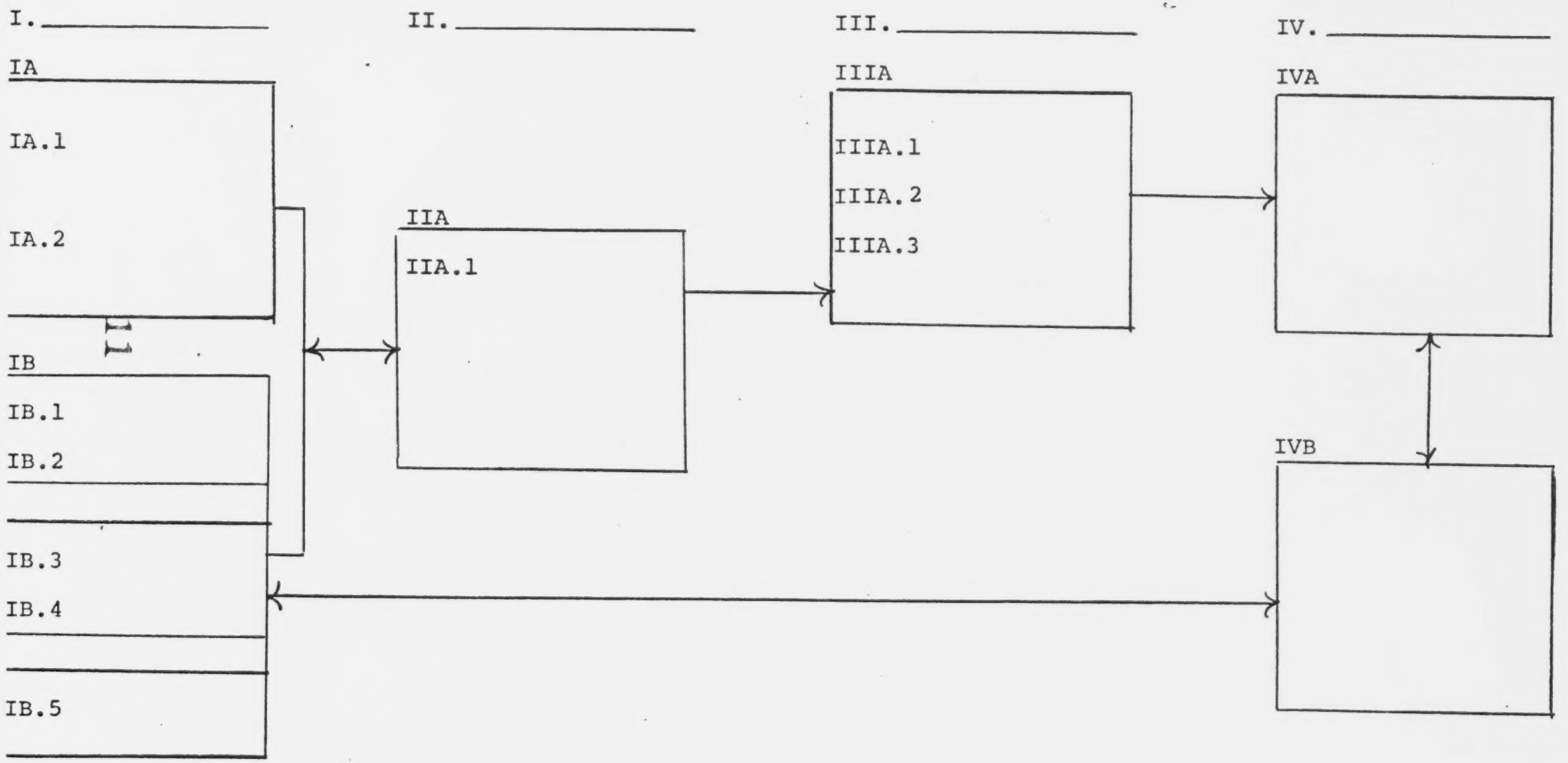
This Model was conceived and developed for one purpose: a means to assess and analyze the educational needs of Virginia's school children. Excellence in education requires a rational basis for change. The first step in change is an assessment of needs. In the Model context the Virginia Educational Needs Assessment Study can measure a state against its own levels of aspiration and further measure a state against levels external to it. The Model also provides the means for continuous evaluation with built in procedures to adjust changing goals to changing outcomes over time.

The first phase of the Study has been completed and submitted in a two-volume report to the Virginia State Department of Education which has sole responsibility and privilege of dissemination of the findings. The Bureau of Educational Research in the School of Education at the University of Virginia can report that the findings indicate there is much more that can, should and must be done to account for all the educational needs of all Virginia's children in all regions and school districts for educational planning and implementation with perspective and accountability.

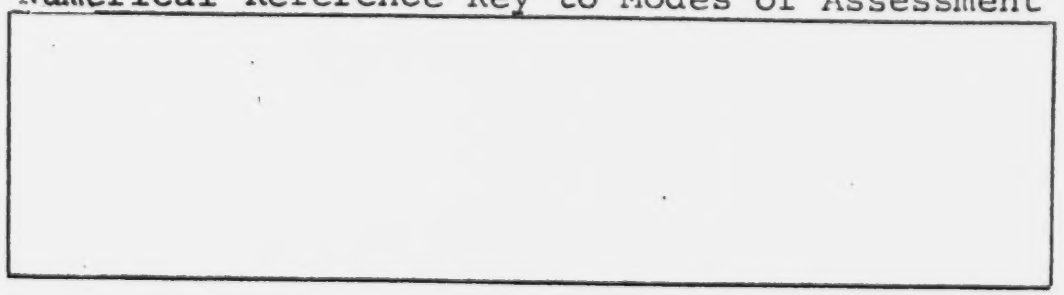
As submitted the Study, in the opinion of the Bureau, is a significant prototype in conceptual design and assessment procedures, and a detailed and depthful report on initial findings of needs, perceptions, and programmatic effort in the cognitive, affective and learning-facilitative domains.

CONCEPTUAL MODEL FOR ASSESSMENT AND ANALYSIS OF LEARNER-ORIENTED EDUCATIONAL NEEDS OF VIRGINIA 1969 - 1970

(Need = gap between educational objective and educational outcome)




Numerical Reference Key to Modes of Assessment



I. INPUTS TO THE FOCAL SYSTEM FROM ANTECEDENT SYSTEMS

IA The Self System Affecting Learner in the Focal System

A personalized mix of interacting factors

IA.1 Individual Characteristics:

Age (1,3)
Race (1,3)
Sex (1,3)
+Physical attributes
Academic potentials including intelligence (2) and
+past achievements
+Other inherited behavior potentials
+Experiential background
Head of household education (3)
Head of household occupation(3)
+Other family characteristics and socio-economic status

IA.2 +Individual Behaviors:

+Self perceptions on entry to Focal System
+Verbally expressed behaviors on entry to Focal System
+Manifest behaviors on entry to Focal System

+ denotes non-measured inputs

IB. The Social System Affecting Learner in the Focal System

IB.1 National Environmental Characteristics:

+Physical
+Cultural
Political (4)
Social (4)
Economic (4)

IB.2 National Educational Enterprise:

Perceptions (4,6,7)
Values (4,6,7)
Goals (4,6,7)
Authoritative Actions (4)

} held by citizens, professional educators, and policy-makers

↕

IB.3 State of Virginia Environmental Characteristics:

+Physical
+Cultural
Political (4)
Social (4,5)
Economic (4,5)

IB.4 State of Virginia Educational Enterprise:

Perceptions (4,6,7,8,9,10,11)
Values (4,6,7,8,9,10,11)
Goals (4,6,7,8,9,10,11)
Authoritative Actions (4)

} held by citizens, professional educators, and policy-makers

↕

IB.5 Local Virginia Community Contexts:

The mix of environmental characteristics*; (perceptions, values, goals, authoritative actions characteristic of localities, school divisions, and particular schools) (8,9,10,11)

*+Physical
+Cultural
Political (4)
Social (4,5)
Economic (4,5)



+ denotes non-measured inputs

## II. THE FOCAL SYSTEM FOR NEEDS ASSESSMENT

### IIA The Learner in the School and Classroom

IIA.1 Interacting influences:

Teacher characteristics and perceptions (9,11)
Principal characteristics and perceptions (8,9)
Elementary
+Secondary
Content perceptions: elementary (9)
+Content perceptions: secondary
Cognitive and affective objectives* (6,7)
+Extra-curricular selection and decision
+Peer group influences
Perceptions of learning-facilitative resources (8,11)
+Learning-facilitative resources

*Variously interpreted and accepted by teachers and principals.

+ denotes non-measured variables

## III. MEASURED OUTPUTS OF THE FOCAL SYSTEM

### IIIA The Self-System of the Learner

Assessment and Analysis of Achievements and Needs

IIIA.1 Cognitive Domain

- Reading (1)
- English (1)
- Social Studies (1)
- Science (1)
- Arithmetic and Mathematics (1)
- Library and Work-Study Skills
- +Other academic and special programs

IIIA.2 Affective Domain

- Self esteem (3)
- Citizenship (3)
- Social interrelationships (3)
- Self in school and classroom (3)

} Indicators of variables under IA.2

IIIA.3 Cognitive Domain ⟷ Affective Domain (1,3)

+ denotes non-measured outputs

## IV. FUTURE ASSESSMENT AND ANALYSIS OF LEARNER-ORIENTED EDUCATIONAL NEEDS OF VIRGINIA

IVA

Self system inputs to ensuing academic time periods

IVB

Re-examination of social system's interacting national, state, local variables for inputs to ensuing academic time periods

NUMERICAL REFERENCE KEY TO MODES OF ASSESSMENT

1. Achievement test results
2. Lorge-Thorndike, California TMM, and SCAT test results
3. VAAQ questionnaire results
4. Documentary analysis results
5. Sample variables: region, enrollment size, population density
*6. Cognitive objectives
*7. Affective objectives
8. Perceptions of elementary school principals
9. Teacher Review Form (Grade 4) plus Principals and Supervisors
10. Perceptions of Educational Goals by status leaders in Virginia
11. Teacher Information and Opinionnaire Form results

*Prototype standard rather than mode of assessment